

▶ **Grid Interconnection / Utility Tarrifs: Issues and Solutions**

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Overview

- Introduction
- Utility Interconnect Issues: “Making Connections”
- Tariff Issues
- Emergence of Solutions:
 - IEEE 1547 – National Grid Interconnect Standard
 - National Energy Policy - FERC
 - Efforts by Midwest Utility Commissions
- Some steps you can take to minimize and address barriers

Introduction

- Since Late 90's Big Buzz on Distributed Energy Resources
 - #1 of 21 Solutions for the 21st Century -Business Week
- Results:
 - DE in U.S. still at a flat 5%
- Causes:
 - Some products not yet ready for market
 - Institutional Barriers
 - Interconnection
 - Tariffs

Utility Interconnect Issues: “Making Connections”

- DOE Study investigating over 65 projects – identified significant barriers on over 85% of projects
 - Lengthy approval process
 - Project- specific equipment requirements
 - High interconnection or study fees
 - Many utilities had not dealt with or were not set up to deal with small project or customer generator interconnection requests
 - No national technical standard for interconnection (equipment, insurance, reasonable charges for connection activities, study fees)
- Can get barriers removed by protesting to utility, to the utility regulator, or to other public agencies
 - Requires considerable time, effort, and resources

Tariff Issues

- **Renegotiated Rates**
 - Rates arbitrarily renegotiated by utility upon threat of DE / CHP project
 - Short term benefits to end user
 - Effective in curbing penetration of key markets
- **Standby Charges**
 - Fixed monthly charge for access to standby power
 - Does not take into account benefit to grid
 - Can cut 25% of project annual savings
- **Exit Fees**
 - Attempts by utilities to reclaim costs of “stranded” assets
 - With projected 50% growth in electricity consumption in the next 10 years – does not appear to make sense
- **Tariff Structures – flat rates vs. time based**

Emergence of Solutions

- IEEE 1547 – National Grid Interconnect Standard
 - Missed first two ballots (consensus basis - needed 75%)
 - New ballot soon: simplified with “guidelines”
- National Energy Policy – FERC
 - 10 % of recommendations on promotion of DE and CHP: FERC NOPR on Interconnection – may effect or be the model for future regulations and standards
- Efforts by Midwest Utility Commissions
 - Developing Interconnection regulations
 - Typically based on Texas and “Draft” versions of IEEE 1547

Emergence of Solutions: MW CHP Initiative and Application Center

- Initiative- Coalition of companies to implement DOE's CHP Roadmap
- Applications Center – DOE sponsored center at UIC's ERC to advance CHP projects
- Work together to assess states and implement actions to promote CHP and remove barriers
 - Midwest PUC Interconnection Working Group Meeting
 - Meetings with Public Utility Commissions
 - Education
 - Suggested tariffs to promote DE / CHP
 - Removal of renegotiated rates and fixed standby charge for clean energy projects
 - Move to more time based tariffs to reduce grid congestion during peak hours
 - Specific Project Based Assistance through Application Center "SWAT Team"

Some Steps You Can Take to Minimize and Address Barriers

- Find Contact Person at the utility responsible for attaining interconnection requests – Maintain Relationship throughout the process
 - Request proper application forms and interconnection guidelines; make sure you understand the technical data they are requesting
 - Ask the utility to specify how long it will take to process the application and the fees associated with it and follow up.
- Find contact at Utility commission
 - Request guidelines or rules that may apply
 - Ask whom to contact for dispute resolutions
- Any significant problems or issues: Contact MW CHP Application Center (www.chpcentermw.org)

DISCUSSION QUESTIONS

- Have any of you tried to pursue a DE project and faced any of the barriers discussed?
- If so, what was the outcome or solution?
- As Federal energy managers, what issues do you face with regard to DE? What are your concerns?
- What approaches can be taken by Federal energy managers to reduce barriers to DE implementation?
- Have you considered meeting on a regular basis to approach utilities as a concerted entity?